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WOMEN'S EDUCATIONAL EQUITY

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Awards

2005

The Department awarded 15 grants under the FY 2005 Women's Educational Equity competition. View the FY 2005 abstracts.

2004

The Women's Educational Equity program did not hold a competition for FY 2004. All available funds for this program will be used to support continuation grants in their second and third years of successful progress.

2003

The Women's Educational Equity program did not hold a competition for FY 2003. All available funds for this program will be used to support continuation grants in their second and third years of successful progress.

2002

In FY 2002, 6 grants were awarded under the Women's Educational Equity program. View the list of project abstracts:
MS WORD (33K)

2001

Women's Educational Equity Act Program/Implementation

Women's Educational Equity Act Program/Research and Development

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Last Modified: 07/17/2006

Women's Educational Equity Program FY 2005 Grantee Abstracts

Cal Poly Pomona

Project Goal/Background: The goal of the Mentoring And Professional Development Equity Project at Cal Poly Pomona is to develop and implement a model that will increase the number of women eligible to join the professional workforce in the math, computer, and physical sciences. The project focuses on the critical junior and senior years in college for women majoring in chemistry, computer science, mathematics, and physics. These upper-division women will have many opportunities to interact and network with women role models, such as women professors in academia and women professionals in industry. Mentoring and professional development activities will include participating in formal research seminars, engaging in informal discussions concerning issues about women in science through email and Internet chat rooms, conducting research projects, visiting industry sites, and participating in professional conferences. This project will increase the educational equity at Cal Poly Pomona and also will provide a model for other universities.

Objectives: The objectives of the four-year Mentoring and Professional Development Equity Project are the following:

- To determine the baseline graduation rate of women in targeted majors at Cal Poly Pomona;
- To increase the graduation rate for women in this project by five percent from the present baseline;
- To deliver mentoring and professional development opportunities over the four years of the program to at least 50 percent of women targeted in this project;
- To determine some of the other factors that influence women in the targeted majors who leave without graduating; and
- To document the successful transition of women in the project into the professional workforce.

Project Outcomes: At the end of four years, the expected educational outcomes for the women served by the Mentoring and Professional Development Equity Project are:

- Increased graduation rates;
- An increase in the targeted population's awareness of support available through the project;
- An increase in the number of women who become role models after graduation when they join the professional workforce; and
- The development of action items with respect to the educational environment in college of science and additional interventions that could be part of the university's broader plan.

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GEM-SET Mentoring for Success

Project Goals: The overall goal of this mentoring program is to increase the number of low-income women students in Cook County Public Schools who pursue and excel in Advanced Placement (AP) or college level courses in mathematics, science, and computer science. This goal will be achieved through two main objectives including:

- Connecting high school students to positive role models at UIC with a special emphasis on undergraduate women students with similar ethnic/racial backgrounds,
- Increasing the access to college level (AP) courses within the high school and as part of the City Colleges of Chicago "College Excel Program for High School Students."

Conceptual Background: There is clearly a gender gap when comparing the number of female and males taking AP courses in science, technology, and math (NSF, 1999). Research shows that the gender gap is slight up to about sixth grade, then in junior high and senior high the gap widens and differences in achievement levels increase each year (Metz & Staffin 1996). The reasons for the leak in the pipeline have been explained in a variety of ways, including a pedagogy that favors male learning styles (AAUW, 2000), a Greek mythology that steers girls into other academic pursuits (Margolis and Fisher, 2002), and gender-based societal stereotyping that clusters career choices based on gender (Thom, 2001). Research also shows that quality mentoring can have an impact on decisions such as course selection and career goals (Rhodes, 2002). The GEM-SET Mentoring for Success program will add to the body of literature that shows how mentoring can positively impact high school students' academic pursuits.

Research Question: Does mentoring have an impact on Advanced Placement and college-level course selection in science, technology, and math?

Study Design: UIC undergraduate students will be selected to mentor high school students in Cook County Public Schools over a four-year period. Participants in the Girls' Electronic Mentoring for Science, Engineering, and Technology (GEM-SET) will be offered the opportunity for intensive mentoring as part of the GEM-SET Mentoring for Success after school program. The students who receive this intensive AP course coaching will be expected to choose AP courses in higher numbers and to receive better grades than the group that does not receive the GEM-SET Mentoring for Success after school program. The program aims to recruit at minimum 6 undergraduate mentors, and 60 high school students who will be tracked over 4 years. The researchers will compare the outcomes of the 60 mentored students to 60 non-mentored students from the same schools, with similar race/ethnicity and socio-economic backgrounds. The outcome variables that will be tracked are retention in the program, number of AP and/or college level courses selected, and grades in the selected courses.

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IRCO Young Women's Equity Project

Project Goal/Background: The four-year Young Women's Equity Project (YWEP) will serve low income, limited- English proficient young Portland metro area refugee/immigrant African and Slavic women, ages 14 through 23, who suffer multiple forms of discrimination. Services, provided by bilingual/bicultural staff in coordination with schools, include 1) Math and Science Awareness Activities (over 50 participants annually), 2) Individualized Support (50 participants annually), and 3) Academic Support Activities (over 50 participants annually). YWEP will increase the number of young women pursuing advanced courses and entering highly skilled careers in mathematics or science (including computer science) in which they have been underrepresented.

Project Objectives:

1) Reduce socio-economic cultural barriers and stereotypes associated with traditional gender roles;
2) Increase family and community support for young women to succeed in educational and career opportunities in the fields of math and science;
3) Increase participants' understanding of educational and career opportunities in the fields of math and science;
4) Improve participants' academic performance in math and science fields;
5) Enhance IRCO's existing partnerships with local educational agencies, institutions of higher education, community partners, and parent, teacher and student groups by increasing opportunities for young women.

Project Outcomes: 1) 85% of participants will have increased awareness of math and science courses, and fields of study; 2) 80% of participants will be enrolled in math/science classes; 3) 75% of participants will maintain a 3.0 or "B" GPA in all math and science classes attempted in the academic year of the reporting period; and 4) 75% of participants will be placed in summer practicum, internships, job shadows, short-term employment that are related to math/science careers.

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Project ISIS

Project Goal/Background: Project ISIS is designed to cultivate the mathematical talents and interests of women at two critical points in their academic careers: school and college. ISIS focuses on middle school girls to motivate interest, strengthen academic preparation, and increase informational resources for parents/guardians so that they can support their daughters in pursuing college preparatory courses and experiences. Female undergraduates who demonstrate interest in mathematics are guided on a pathway to careers in mathematics and teaching.

In this vein, the goals of Project ISIS are:

1) Provide educational opportunities and support for middle school girls to improve their mathematics academic performance and encourage them to pursue higher education and careers in mathematics related fields;
2) Establish an academic, financial, and mentoring support structure for female undergraduates who are considering teaching as a career, or who are pursuing advanced degrees in mathematics-related professions; and
3) Implement evaluation and dissemination strategies to maximize project impact, support replication, and advance the knowledge of the mathematics community.

Project Outcomes: There are several outcomes that are anticipated from this project. Project ISIS will increase the pool of middle school girls matriculating through mathematics courses by improving the project participants' performance and strongly encouraging them to enroll in more mathematics courses. It is expected that a solid academic background will support these girls in pursuing a higher education in mathematics and careers in mathematics related fields. ISIS will build parent/guardian awareness of the support structure for middle school girls. ISIS will increase the number of female undergraduates who pursue degrees in teaching or advanced study in mathematics by providing academic, financial and mentoring support.

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Women in Biotechnology and Information Technology (WIBIT)

Project Goal/Background: WIBIT combines informal after school science and technology activities at the middle school level with enrichment of formal science and technology classes at the high school level to provide young women with a clear pathway to advanced science/technology classes and science careers. The WIBIT curriculum integrates information technology into biotechnology exploration where students use the techniques of biotechnology to produce a product or investigate a crime, and then use information technology to express their findings through marketing their product online or creating an interactive computer game. Components of the curriculum are based upon tested models that are further developed and combined in new ways to create a gender-neutral learning environment in which students both act as scientists investigating products and problems, and as content producers in a technology-rich environment.

Project Objectives/Goals:

OBJECTIVE 1: To increase the knowledge base of low-income women and girls in science and technology and in careers in these fields.
Anticipated Outcomes at Project Completion:

- 60% of the female students participating in the middle school after school program will be from low-income households;
- 70% of students participating in the middle school after school program will increase their knowledge and skills in computer technology by at least 50% by the end of the project;
- 60% of students participating in the middle school program will reach the "apprentice" level of mastery of knowledge and skills in biotechnology and information technology;
- 15% of students participating in the middle school program will reach the "expert" level of mastery of knowledge and skills in biotechnology and information technology; and
- 80% of students participating in the middle school after school program will increase their level of knowledge about science and technology careers.

Women in Biotechnology and Information Technology (WIBIT)

- The number of the female students participating in the enriched high school classrooms that identify sciences and technology as potential career paths will increase by at least 5% per year; and
- 50% of parents of participating students will attend at least one of the project's parent activities designed to enhance parental knowledge of science/technology careers.

OBJECTIVE 2: To increase the participation of low income women and girls in advanced science classes.
Anticipated Outcomes at Project Completion:

- 45% of female students participating in the middle school after school program will choose to enroll in enriched science/technology classes when they reach high school;
- The number of female students participating in the middle school program who choose to enroll in advanced science classes in high school will increase by at least 5% per year; and
- The number of female high school students enrolled in the enriched classrooms who choose to enroll in advanced science classes in high school will increase by at least 5% per year.

OBJECTIVE 3: To engender systemic change in secondary school science and technology that promotes gender equity in those fields where women and girls have traditionally been underrepresented.

Anticipated Outcomes at Project Completion

- By the end of the project, 50% of science and technology teachers in participating schools will participate in one or more of the summer workshops that teach gender-neutral educational methodologies;
- 80% of teachers participating in the summer workshops will reach the "apprentice" level of mastery of knowledge and skills in biotechnology and information technology;
- 15% of teachers participating in the summer workshops will reach the "expert" level of mastery of knowledge and skills in biotechnology and information technology;
- 90% of participating teachers will integrate at least one unit in their science/technology classroom based on content and methodologies that they learned in the summer workshops;
- 40% of participating teachers will adopt gender-neutral teaching methodologies in other units of their science/technology classroom;
- At least two science classes in each high school will participate in classroom enrichment;
- By the end of the project, both high schools will, if financially feasible, integrate the MESA model fully into their science/technology curriculum; and
- Overall student science scores on the WASL (Washington Assessment of Student Learning) will rise at targeted schools, with the greatest increase being among female students.

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Project Science Math And the Right Technology (SMART)

Project Goal/Background: Jefferson County Public Schools (JCPS) proposes Project Science Math And the Right Technology (SMART), a program that will help teenage mothers excel in math, science and computer science courses and enable them to gain the skills needed to pursue post-secondary education in highly skilled fields. Grant funds will be used to promote educational equity for pregnant and parenting teenagers attending the district's two Teenage Parent Program (TAPP) schools. Project SMART is a partnership between four district programs, The Louisville Education and Employment Partnership (LEEP), the Computer Education Support Unit, JCPS eSchool, and TAPP.

The foundation of the project is to provide teenage mothers with advanced technology in the classroom that can help increase their academic skills in math, science and technology. While many TAPP students may not be academically performing as well as their peers, this is due more to circumstance than aptitude. Project SMART will provide the 600 students who attend TAPP schools annually with classroom technology that is not currently available in most JCPS schools.

This technology includes student wireless laptops, teacher laptops with projection systems, ProScope microscopes and graphing calculators. TAPP students will be immersed in technology in their math and science classrooms daily so that they can develop the math, science, and technology skills teenage mothers need to be better prepared for a technologically demanding workplace, post-secondary education and/or training.

The project's three components will help increase girls' skills in math, science, and technology while increasing their awareness of career opportunities in traditionally underrepresented fields. These components include: 1) integrating technology into all math and science classrooms, 2) providing students distance learning opportunities to pursue math and science courses on-line for high school and/or college credit and 3) providing school-to-work opportunities which emphasize math, science, and computer science careers,

The following objectives serve as the framework for the project's goal of assisting pregnant students and parenting teenagers to remain in school, and graduate and transition successfully to post-secondary education, training or the workforce.

Project Objectives:

Objective 1: To increase students' academic abilities in math, science and technology through the integration of technology in math and science classrooms as indicated by a 3% annual increase in standardized test scores.

Objective 2: To provide opportunities for sophomores, juniors, and seniors to pursue advanced courses in mathematics or science (including computer science) as indicated by a 5% annual increase in enrollment.

Objective 3: Provide school-to-work transition, guidance, and counseling activities which focus on technology careers for a minimum of 70 TAPP students annually in order to ensure that girls have the necessary knowledge and skills to successfully enter a technologically demanding workplace, post secondary education and/or training.

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WISE Start: Increasing Opportunities for Native American Women in STEM Programs

Project Goal/Background: The South Dakota School of Mines and Technology (SDSM&T) is a small, focused science and engineering university. In a state where 8.3% of the population is Native American, 2.6% of SDSM&T's undergraduate population are Native Americans. The institution has set as a priority the goals of increasing the number of Native American in its science, technology, mathematics and engineering (STEM) programs and increasing the completion rate of this group so that it is on par with the institutional rate.

The WISE Start program focuses on low-income, Native American women and thus addresses the Invitational Priority for "projects designed to increase the number of low-income women and girls pursuing and excelling in advanced courses in mathematics or science (including computer science), and entering highly skilled careers in which they have been underrepresented."

Project Objectives:

The objective of the WISE Start program is to develop a model approach to developing a sustainable program that will attract and retain Native American women to STEM programs. Specifically, measurable goals of the program are:

1. At least 75% of each cohort will be retained into the second year of college study in science or engineering at the South Dakota School of Mines and Technology;
2. At least 85% of each cohort will complete 28 or more college level course credits by the end of their first year; and
3. All cohort students will achieve a cumulative grade point average of at least 2.25 out of 4.0 at the end of their first year of college study.

The program will work with two cohorts of Native American women, the first comprised of students about to enter our university and the second of students one year away from doing so. Students will participate in SDSM&T's JumpStart program, an intensive four-week residential summer bridge program that includes courses in college algebra and chemistry along with programming to assist students in making the transition to the expectations of a STEM curriculum. Upon matriculation, students will participate in a Mentors and Mentees (M&M) program modeled after the successful program of the same name at Purdue. This program will be expanded for WISE Start students with mentoring from Native American women who are engaged in science based professions and additional programming to address the cultural challenges faced by this group in a predominantly white, male environment.

The program will capitalize on existing efforts at SDSM&T to recruit and support women and minorities. The majority of funding requested will go as direct support to the students involved, paying the cost of participation in the JumpStart program as well as the cost of room, board, tuition, and fees for the first college year.

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Access for Young Women

The Forest Hills Community House (FI-ICI-I) is a not-for-profit multi-service settlement house serving the Borough of Queens in New York City. We are requesting a grant for the expansion of our model gender equity program — Access for Young Women (AFYW). The program will involve 100 young women ages 12 to 18 most of whom are recent immigrants to the United States, or daughters of immigrants. AFYW will develop them as leaders and advocates for gender equity, involve them in a technology project, and expose them to careers in mathematics, science, and engineering.

The year-round program will operate at four sites, serving the seven school districts that comprise Queens. The young women will:

- Conduct research on gender equity and education issues;
- Explore nontraditional careers, with particular emphasis on math, science, technology and computer science;
- Address underlying causes of bias and inequity in education through presentations and other public events, including a full-day conference on gender equity and education issues;
- Focus public attention on issues of educational gender equity and Title IX compliance through the conference and by convening a county-wide Task Force comprised of young people, educators, youth workers, colleges and universities, museums and cultural institutions, and elected officials to examine gender equity in education and its social roots and make recommendations for action in families, schools and communities;
- Work with female role models and mentors that are representative of their racial and ethnic background and immigrant status;
- Develop technology skills; and
- Work collaboratively with other youth-focused organizations doing gender-based and equity work in New York City and nationally to share strategies and disseminate findings.

Project Goal: Goals for the project, which will be measured through quantitative and qualitative evaluation include:

- An increased understanding of gender bias and gender equity among participants;
- Greater knowledge of career options in math science, engineering, computer science and technology;
- Acquisition of new skills in technology;
- An increased number of young women who identify career goals in mathematics and science; and
- Dissemination of information about gender bias in education and careers, obstacles to non-traditional fields, and the technology gap to a broad audience.

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University Of Texas At El Paso—Project Action For Equity

Project Goal/Background: This proposal is for a grant under the WEEA Program, requesting funds to move forward a collaborative agenda to engage UTEP's Colleges of Education and Engineering, School of Public Health, eight school districts, and local AAUW affiliate, in promoting equity in education for girls and women, with a focus on STEM programs of study. Project Action for Equity (ACE) is driven by a long-term plan by UTEP to enhance educational and career opportunities for Hispanic girls and women on the US/Mexico border who suffer multiple forms of discrimination based on gender, ethnicity, limited English proficiency and socioeconomics status.

The goals of Project ACE are to: 1) foster participation of school, university and community educators in advancing gender equity issues in grades K-20; 2) increase the representation of Hispanic girls and women in STEM programs of study; and 3) institutionalize reforms in UTEP's program of studies for future teachers to advance gender equity. ACE activities will include: interactive workshops and seminars for 800 girls and women; training for 111 K-20 teachers and university faculty on gender equitable practices in STEM instruction; development and dissemination of project materials in English and Spanish through an interactive web portal; and institutionalization of service-learning at UTEP's College of Education to promote gender equity. This project will impact 800 girls and women on the US/Mexico border. Eleven UTEP faculty members will work with 300 future teachers, each one of whom will interact with children and families in her/his future career as a teacher.

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University of Kansas

Project Goal/Background: Young women with disabilities leave school with less positive adult outcomes than their male counterparts. Employment rates for women with disabilities are reported to be 20% to 30% lower than women without disabilities or men with or without disabilities (Doren & Benz, 2001). Research indicates that males with disabilities are more likely to be employed, earn higher wages, work full time, and remain employed than are females. When employed, females with disabilities are more likely to be employed in unskilled jobs than males in spite of a lack of difference between sexes in I.Q., achievement, and basic job skills (Hasazi, Gordan, & Roe, 1989; Sitlington & Frank, 1993).

The Kansas University Center on Developmental Disabilities, University of Kansas, proposes to develop and evaluate a gender equitable self-directed education to employment model to enable young women with disabilities to direct their own education and transition paths and gain skills, experience, and support in nontraditional vocational areas and to achieve competitive employment outcomes in their chosen careers. The model is based on two innovative and validated employment- focused approaches and an effective, field-tested curriculum guide and materials: the Self-Determined Career Development Model (SDCDM) (Wehmeyer, Lattimore, et al, 2004), Customized Employment (Office of Disability Employment Policy, 2004; Parent, 2004), and Gender Matters (Rousso & Wehmeyer, 2002).

The first year of the project will involve materials development, teacher training, and pilot-testing the gender equitable self-directed education to employment model in seven schools around the state of Kansas. In years two and three the model will be implemented for 70 young women with disabilities enrolled in fourteen high schools in Kansas. The efficacy of the model will be evaluated through examination of student, teacher, school, and employment outcome data. In addition, three longitudinal studies will be conducted including: 1) the impact of the gender equitable education to employment process on the goal-attainment problem-solving skills of young women with disabilities; 2) the impact of the gender equitable education to employment model on young women with developmental disabilities; and 3) the impact of the gender equitable self-directed education to employment model on teaching practices. In year four, project activities will focus on large scale training and dissemination of information and materials to people who can most benefit from it, including young women with disabilities, teachers, transition specialists, paraprofessionals, school administrators, family members, and community agency representatives, using a variety of methods and formats.

Project Outcomes: The anticipated outcomes to be accomplished as a result of completing the proposed activities are as follows: 1) a gender equitable vocational curricula and materials will be developed; 2) 21 schools will implement the gender equitable education to employment model; 3) 84 middle and high school young women will gain skills and experience in self determination and non-stereotypical vocations; 4) 70 young women with developmental disabilities will become competitively employed in nontraditional careers; 5) teachers, paraprofessionals, and transition specialists in Kansas will gain training, technical assistance, and resources to incorporate a gender equitable education to employment model in their school programs; and 6) educators, administrators, and interested persons nationwide will receive information, materials, and resources to promote the gender equitable self-directed education to employment model in their local school systems.

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Raising Interest in Science & Engineering (RISE)

The Miami Museum of Science and Planetarium, in collaboration with Miami-Dade County Public Schools (M-DCPS), SECME (formerly the South East Consortium for Minorities in Engineering) and Florida International University is proposing a project aimed at raising awareness of, and interest in, engineering and advanced technology among high school girls, particularly girls of color. Titled RISE, (Raising Interest in Science and Engineering), the project is a response to the continued under-representation of women and minorities in science, engineering, and technology (SET) fields, as documented in the 2002 report Title IX at 30.

Key objectives are:

- To extend RISE programming to SECME Clubs at the lowest-performing high schools in Miami-Dade County, building girls' content knowledge, interest and motivation to pursue SET careers;
- To enhance the skills of M-DCPS high school science teachers through professional development in technology integration, gender equity strategies, and development of hands-on science and engineering activities;
- To increase parental/guardian awareness and elicit their support for their daughters' SET education and related career aspirations;
- To implement a comprehensive evaluation plan and contribute to the field by examining the impact of combining formal and informal learning environments on equity-based education; and
- To broadly disseminate program strategies and professional development materials.

RISE builds on established relationships between the collaborating partners. Through an exploratory grant from the National Science Foundation in 1996, the Museum developed an exemplary model aimed at reducing attrition in advanced math and science courses among middle school girls. Through a subsequent collaboration with M-DCPS this model was adapted and replicated by all M-DCPS middle schools working through the network of extracurricular engineering clubs sponsored by SECME. Building on lessons learned in the middle school effort, the Museum will extend RISE programming to the high school level, adding new components related to teacher development and parent involvement.

The project will recruit a total of 80 girls — 20 per year from four of Miami's most underserved high schools. Girls will participate in 10 Saturday workshops during which they will be introduced to hands-on tabletop science exhibits and the technology and design skills needed to create them. They will then take part in a 4-week Summer Academy during which they will design and build their own tabletop exhibits and create web pages documenting their experience. The following school year, RISE girls will lead exhibit design challenges with fellow SECME Club participants at their school, and will also serve as Museum interpreters, demonstrating their exhibits to the public. During the 11th and 12th grades, they will also be eligible for internships at the Museum, in local SET- related businesses, and at Florida International University. They may also enroll in advanced science courses for college credit under Florida's Dual Enrollment Program.

RISE will provide professional development for all of the science teachers at each target high school, aimed at enhancing gender equity teaching strategies, raising awareness of technology and engineering career opportunities, and improving technology integration skills. The project will also include a strand for parents and guardians of participants, raising their awareness of how they can support their daughters' pursuit of science education and careers, and preparing them to take part as paid assistants in the SECME after-school clubs at their daughters' schools. RISE strategies, materials, and findings will be disseminated through web-based and print media, as well as through presentations and workshops conducted each year at the national meeting of the Association of Science and Technology Centers, as well as the national SECME Summer Institute that convenes representatives from SECME's broad- based alliance.

SECME is the nation's largest pre-college alliance, linking 38 universities and 110 school systems in 17 states, aimed at increasing the number of underrepresented students prepared to enter the SET pipeline.

A third-party evaluator will conduct an intensive formative and summative evaluation of four project domains (girls, teachers, parents, and institutional), to provide formative input for project implementation and to assess project outcomes and institutionalization strategies.
RISE will reach 220 participants directly (80 girls, 60 teachers, and 80 parents), and approximately 9,450 students at the four target high schools via impact on SECME Clubs and science classrooms.

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Learning Environment Advancing Development (LEAD) - Women Students Project

To lead more women students, many of whom face the difficulties of inner city life, to pursue careers in mathematics, in particular, and science, engineering and technology, in general. Medgar Evers College (MEC) of the City University of New York (CUNY) has 79% women students, 98% minority, and serves as a beacon to the community. There is: 1) a high attrition rate in lower division mathematics courses, and 2) a majority of students who do not take mathematics courses beyond pre-calculus.

To improve this situation, the Department of Mathematics of MEC and the College plan to attain the following objectives and achieve the above stated goal during the two-year period 2005-2007:

1. Increase the number of women students completing mathematics courses by offering programs tailored to the needs of students, that include: synchronizing academic and supplemental instruction, curriculum development, career and personal advisement/counseling, and creating a conducive learning environment with higher expectations from each of the students.

2. Motivate MEC women students to select either mathematics or a science by: a) building their self-confidence in doing mathematics; b) bringing them in contact with their peers who are performing at the highest level in their courses, and also with minority and other women who are successful in STEM careers; c) encouraging them to do undergraduate research with math and science faculty at MEC and elsewhere; d) making them present their research in conferences and; e) see their achievements in programs at school and media.

The target populations consist of freshmen and sophomores taking mathematics courses from basic skills to pre-calculus and juniors and seniors majoring in sciences and mathematics. The college will meet its goal and objectives by implementing the activities under the following four categories:

1. Improvement of instruction through process and content for early intervention,
2. Tutoring,
3. Counseling and motivation, and
4. Undergraduate research and mentoring.

These activities form a systemic effort, part of a comprehensive plan to promote women's equity, and will be carried out by a team of eight experienced college faculty from mathematics (4), psychology (1), Post-Secondary Readiness Center (PSRC) (1), and counselors - Student Advocacy and Support Services (SASS) (1), the Freshman Year Program (FYP) (1), consisting of four men and four women, and three African Americans. Every student at MEC comes in contact with these departments for a year or more.

Innovation: The proposed activities are similar to the successful programs around the country to increase the number of minorities and women in STEM. The important difference is that the activities in this proposal have the undercurrent of the Theory of Constraints (TOC), and we will work to create success in our existing students. Through a demonstration of that success we hope to attract more high-achieving students. Findings of and communications with other exemplary

programs such as Meyerhoff Program at UMBC, Women's Equity Programs in the country and e-mentoring programs will be used.

TOC, created first in 1990 for business and industry, is used by thousands of businesses, such as Proctor and Gamble, and US Armed Forces. From 1996 TOC is applied in education in counseling, curriculum development, instruction, training, and conflict resolution by schools in Michigan, California, Texas, the United Kingdom, and Mexico. In the Philippines and Malaysia TOC is taught as a subject beginning from elementary schools. TOC has been used in over 50,000 classrooms and five continents, but it is the first time TOC is being used systematically to improve retention and increase STEM enrollment in a college. The project is self-sustaining after the grant period since it changes thinking paradigm.

Significant Deliverables

1. Instructional process and content - on mathematics;
2. Online courses and test banks before calculus to provide supplementary instruction;
3. A TOC manual to build students' self-confidence and equip female students with logical tools to overcome various barriers and develop life-long problem solving ability; and
4. A viable counseling, undergraduate research, and mentoring program. Any college, especially urban, around the country, can adapt these.

Contact:
Umesh Nagarkatte
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Research Foundation of CUNY
Math Department
1150 Carroll Street
Brooklyn, NY 11225

Expanding Your Options: The Road to the Future

Expanding Your Options is a statewide project designed to address the needs of young girls and adult women who face an ever continuing challenge to excel in areas of education, employment and earnings. This project is designed to educate and promote gender equity in all three of these areas. Expanding Your Options is a collaborative effort to meet the needs of girls and women across the State of South Dakota. It will be administered by South Dakota Women Work!, which is a network of members committed to promoting equity and women's issues throughout the state and Southeast Technical Institute. South Dakota Women Work! is a nonprofit organization dedicated to empowering women from diverse backgrounds and assisting them to achieve economic self-sufficiency through job readiness, education, training, personal and professional development, and employment. Southeast Technical Institute is a regionally accredited two-year, Associate of Applied Science degree granting institution whose mission is to develop and provide high quality technical education.

The extensive partnership with organizations and educational institutions across the state is designed to provide training to counselors, administrators, educators, job placement specialists, and Bureau of Indian Affairs administrators, educators, and personnel to make certain that the requirements of Title IX are met, as well as promote equity in education regardless of sex, race, ethnicity, limited English proficiency, disability, or age.

Economic and educational disadvantage will be a prime criterion for choosing participants. The target population is elementary, middle and high school age girls, including pregnant and parenting teens, school dropouts, alternative school students, and other at-risk youth, single mothers, and displaced homemakers. The emphasis will be on serving Native American and other minority girls and women.

Contact:
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Southeast Technical Institute
2320 N. Career Avenue
Sioux Falls, SD 57107

West Virginia Women Work Women Can Do

One of the major issues that remains to be resolved as we begin the 21st century is gender equity in the workplace. Long-established barriers to male-dominated occupations still exist. Traditional, out-dated, nineteenth century attitudes and expectations for girls and women are still rooted in many of the skilled trades. Equitable compensation for equitable effort continues to plague the advancement of women in high-wage professions.

West Virginia Women Work! was established in 2000 to provide opportunities for women to enter into nontraditional careers. Women Can Do will not only assist women in the present, but will open the door to middle school and high school girls for their futures.
Women Can Do will focus on two major activities.

The first of these is Step-Up for Women which is a postsecondary training program that prepares low-income, under-trained women to enter the trade skills labor market and compete on an equal basis with their male counterparts. Seventy-two participants will be served at three sites throughout West Virginia. The program provides hands-on training, math instruction, GED preparation, and career counseling. Program "graduates" are assisted in securing internships and apprenticeships with the established trade unions. Participants are encouraged to explore career advancement and entrepreneurship

Second, 300 middle and high school girls will have the opportunity to participate in one of three Girls Can Do conferences designed to open the door to nontraditional, high-wage occupations. The conferences will include hands-on workshops in a variety of occupations, presentations by successful role models, and strategies for goal setting and decision-making as they complete their high school years and enter postsecondary training.

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Chelsea Square
Morgantown, WV 26505

Minneapolis High Tech Girls' Society; Building An Equity System

Minneapolis Public Schools (MPS) launched the High Tech Girls' Society (HTGS) in 2003 to increase representation of girls in traditionally male-dominated courses of study, such as aviation, engineering, and information technology. The Society provides hands- on learning activities and mentoring to girls, in cooperation with colleges, universities, and employer partners; and in conjunction with a rigorous academic and technical curriculum. The project model is based on strategies that have been proven effective to improve retention and achievement of girls in non-traditional fields, and specifically to improve achievement of students facing multiple disadvantages. Anecdotal evidence of success abounds, as reflected in the participation of 90 girls in the club's second year of operation, representing the full diversity of MPS students—68% low income, 73% students of color, 23% limited English, 14% with disabilities.

HTGS advocates know that more girls are participating in non-traditional classes and skill competitions as a result of the Society. But district leaders want to expand the activity and to formally evaluate its impact on girls' enrollment and achievement in high level math and science, and on their measurable progress toward high-tech, high-wage post-secondary programs and careers. Evidence of such impact will provide a rationale for ongoing support of the activity. Project leaders will need to build capacity to support the program while decreasing central staffing. This will be done by using grant resources to train school-based leaders; to deploy a school-based service delivery system, to develop on-line tools for communication, scheduling, recordkeeping and dissemination among partners, and to improve efficiency of district-level equity program coordination.

Objectives and expected educational outcomes for girls and women served by the project:

1) To increase the number and percentage of girls pursuing and excelling in advanced courses in mathematics and science, as well as high-tech, traditionally male-dominated career preparation classes; and
2) To increase the number and percentage of girls who indicate increased knowledge of non-traditional careers in math and science, including computer science, and who plan to pursue such careers, and who take measurable steps toward non-traditional pathways.

Contact:
Wendie Palazza
Phone: (612) 668-0652
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Minnesota Public Schools
807 NE Broadway
Minneapolis, MIN 55413

Women's Educational Equity Act Program Grants
FY 2002

Aberdeen Area Career Planning Center
420 S. Roosevelt
Aberdeen, SD 57402-5131

Grant Award: $105,000
Project Director: Jeff Mitchell
(605) 626-2301
email: Jeff.Mitchell@state.sd.us

Girls DiscoverIT is a collaborative project of Aberdeen, South Dakota's Area Career Planning Center; South Dakota Department of Labor; ExplorNet of South Dakota; South Dakota Department of Education's Division of Workforce and Career Preparation; and eight other Career Learning Centers throughout South Dakota. The project is based on ExplorNet's Information Technology camp curriculum, ExplorIT. Through hands-on learning, middle school girls from low-income families will gain knowledge and awareness of careers and learn about technology demanding fields during a one-two week technology camp. As a part of the camp, girls will develop leadership skills, tour technology based businesses and industries, and observe women in nontraditional technology careers. Girls will also build and upgrade computers, design a robot, and learn basic electronics.

The Aurora Foundation, Inc.
PO Box 85623
Tucson, AZ 85623-5623

Grant Award: $144,939
Project Director: Stephanie A. Parker, Ph.D.
(520) 370-7594
email: saparker@cox.net

The Aurora Foundation, Inc. proposes to replicate, expand and evaluate an exemplary model program that advances educational equity for minority girls with disabilities. The four year project features a two-year leadership and training program that includes the delivery of two curriculums through classroom instruction. During the first semester girls will participate in Living Out Loud (LOL), a life skills curriculum. The following semester girls will move on to Part B, a one-semester leadership training and financial literacy curriculum entitled LEAD. The Aurora Foundation will recruit mentors for each participating girl. Girls will be matched according to career goals and interest. The Aurora Foundation will provide training and supervision of the mentors. Mentoring will continue through the second year of the program. At the end of the two years, participants will have an increased interest in pursuing post-secondary education and be able to make an informed decision regarding career goals.

Boston Public Schools
Odyssey High School
95 G Street
South Boston, MA 02127

Grant Award: $129,013
Project Director: Deborah Jencunas
(617) 635-9857
email:
djencunas@sboston.boston.k12.ma.us

The Women in Science and Environment (WISE) will operate in partnership with Boston Public Schools, the Urban Ecology Institute at Boston College, and the Sea Grant Program at the Massachusetts Institute of Technology. The project will serve 300 students each year. Project WISE will provide hands-on experiences in science and environmental industries. Highly accomplished female educators and scientists from the partners will be role models and mentors and assist students in developing leadership skills and self confidence.

The project will offer students an integrated science curriculum mainly based at field site, and internships in industries. WISE activities, team teaching, and the project-based approach to teaching and learning will increase student's motivation to remain in and graduate from high school and improve literacy skills and academic abilities in math, science and technology. Guidance and referrals to external services such as parenting skills workshops, counseling or health services will be provided. Parents will be involved in the program and encouraged to join the program's advisory group.

Howard University School of Social Work
601 Howard Place, NW
Washington, DC 20059

Grant Award: $179,074
Project Director: Jean McRae
(202) 806-8321
email: jmcrae@howard.edu

The Howard University School of Social Work will provide leadership training emphasizing young women of color in senior high school, grade 9-12. The project will address leadership meaning and roles, self-esteem, career development, conflict resolution, and future planning and goal setting. A printed manual (with a trainer's guide) and two CDS-ROMs (English and Spanish) will be provided for nationwide distribution. The program will be implemented immediately in 6 public high schools in the Washington, DC metropolitan area. Participants will include young mothers and students with disabilities, and will be trained in 8 groups of 25 each..

The educational objectives of the program are:
1. Improve school grades
2. Improved school participation
3. Improved conflict resolution
4. Improved community participation
5. Improved positive choices

San Mateo County Office of Education
101 Twin Dolphin Drive
Redwood City, California 94065-1064

Grant Award: $129,953.00
Project Director: Dr. Carmen Delgado-Contreras
(650-802-5619
Email:
cdcontreras@smcoe.k12.ca.us

Stepping Stones Across the Digital Divide, operated by the San Mateo County Office of Education, will provide direct services to 50 Hispanic females in grades 3 to 6. The goal of the project is to increase academic performance through developing computer and emerging information technologies. Parents will be provided computer instruction to enable them to assist their daughters. This project will not only increase student academic performance but also will increase parental involvement and electronic competence.

During the second year, parents who have completed the first ear's parent instruction will serve as tutors and resources to new parents participating in the program. Parents will develop as computer technology leaders in the community and in the school. During the second through the fourth year, parents will complete their computer training to earn a laptop computer so they can assist their daughters in completing homework assignment at home using the laptop.

Tyler Public Schools
100 Strong St
Tyler, MN 56178-0659

Grant Award: $139,389
Bruce Houck
(507) 247-5911
Email: bhouck@rtr.mntm.org

The Equity for Young Women with Disabilities Project will implement a researched-based models that 1) provides young women with opportunities for internships and experiences in nontraditional jobs; 2) increase participant self-esteem; and 3) make schools more aware of the impact of high school work experience, utilization of friend-family networks to find student employment opportunities, and the effect of self esteem on employment and salary outcomes. The project also intends to impact pre-service preparation of special education teachers through the development of curriculum module. This module will be distributed to higher education institutions that train special education teachers. The module will present critical issues related to transition from high school for young women with disabilities and present strategies for enhancing transition.